United States Department of Agriculture
Bureau of Biological Survey

Wildlife Research and Management Leaflet BS-21

Washington, D. C. * October 1935

FEED COST OF PRODUCING YOUNG RABBITS TO WEANING AGE

By Chas. E. Kellogg, biologist, Section of Fur Resources,
Division of Wildlife Research

Feed costs of producing young rabbits have been determined and tabulated by the Bureau of Biological Survey, United States Department of Agriculture, as a result of two experiments conducted at its Rabbit Experiment Station, Fontana, Calif. The experimental work covered a period of two years, and the rabbits used were New Zealands, both reds and whites, of good average breeding, not selected for exceptional producing ability. They were fed alfalfa hay and a concentrated mixture of 2 parts oats, 1 part bran, and 1 part barley, with a small portion of minerals. Some groups were given, in addition, either cod-liver oil or yeast. The rabbits were fed all the hay they could readily consume, a quantity that constituted 63 to 71 percent of the total ration. A small quantity of green feed was supplied in season.

The equivalent of 90.6 does producedin one year 1,540 rabbits that at approximately 60 days of age weighed 5,367 pounds. Partly grown litters at the beginning of the experiments and those not yet 60 days of age at the end brought the total to 5,730 pounds, or an average production for each doe of 63.2 pounds of live young within a year. The does were bred to produce 4 litters a year, but of course this number was not obtained in every case. It was found that it required 5.3 pounds of feed for doe and young to produce 1 pound of live young to 60 days of age. The accompanying table, based on this finding, shows the corresponding feed costs under the varying price conditions. After locating in column 1 of this table the line for the price paid for hay, the rabbit raiser will find this feed cost in the column that has the price (per cwt.) of his concentrates at the top.

If the average number of pounds of young rabbit produced by each doe in a year is increased, however, the feed requirements for a pound of young is lessened. Consequently, the cost is lowered, but not in direct proportion to the increased pounds of live weight, since of course the does themselves and the extra young rabbits eat some additional feed. More rapid gains of the same number of rabbits also require additional feed, but not in proportion to the increased rapidity of gain. The rabbit raiser should endeavor, therefore, in every way possible to increase the average number of pounds of live animals produced in a year by each doe.

Another method of lessening feed costs is to develop a ration that will produce more rabbit meat to every 100 pounds of feed; in other words, a ration that will require less than 5.3 pounds of feed to produce 1 pound of live young. This lessened feeding cost can also be figured from the accompanying table, for it will have the same relation to the cost shown in the table that the amount of feed required has to 5.3 pounds. A series of experiments is now in progress at the Rabbit Experiment Station to develop such rations.

It might also be suggested that the feed cost in one section can be lowered in comparison with that in another by varying the proportion of hay to concentrates, depending on the relative cost of each. For example, the rabbit experimental work conducted by the Biological Survey indicates that the most satisfactory ration is composed of about 60 percent alfalfa hay. In regions where the cost of this hay is relatively high, the proportion may be reduced to 50 percent or even to 40 percent, but to just what point the quantity of roughage in the ration can be reduced without appreciably lowering the thriftiness of the stock is not known. In many instances it will pay to sacrifice the quality of the ration in order to obtain a lower feed-production cost.

The rabbit raiser should keep in mind that the costs shown in the accompanying table are purely feed costs, and should not make the mistake of figuring profits solely from this table. Other important costs include labor, interest, equipment, and depreciation, for which accurate figures have not been determined. This line of investigation is also receiving careful consideration at the Rabbit Experiment Station.

COSTS OF 5.3 POUNDS OF FEED, PRODUCING 1 POUND, LIVE WEIGHT, OF RABBIT AT 60 DAYS OF AGE, USING ALFALFA HAY (63 to 71 percent) AND CONCENTRATES

Price of alfalfa hay per ton	Feed cost when concentrates, per cwt., cost--															
	$0.75	$1.00	$1.10	$1.20	$1.30	$1.40	$1.50	$1.60	$1.70	$1.80	$1.90	$2.00	$2.10	$2.20	$2.30	$2.40
	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents	Cents
$10.00-	3.08	3.51	3.68	3.85	4.03	4.20	4.37	4.54	4.71	4.89	5.06	5.23	5.40	5.57	5.75	5.92
$12.50-	3.53	3.96	4.13	4.30	4.48	4.65	4.82	4.99	5.16	5.34	5.51	5.68	5.85	6.02	6.20	6.37
$15.00-	3.98	4.41	4.58	4.75	4.93	5.10	5.27	5.44	5.61	5.79	5.96	6.13	6.30	6.47	6.66	6.82
$17.50-	4.43	4.86	5.03	5.20	5.38	5.55	5.72	5.89	6.06	6.24	6.41	6.58	6.75	6.92	7.10	7.27
$20.00-	4.87	5.30	5.47	5.64	5.82	5.99	6.16	6.33	6.50	6.68	6.85	7.02	7.19	7.36	7.54	7.71
$22.50-	5.32	5.75	5.92	6.09	6.27	6.44	6.61	6.78	6.95	7.13	7.30	7.47	7.64	7.81	7.99	8.16
$25.00-	5.77	6.20	6.37	6.54	6.72	6.89	7.06	7.23	7.40	7.58	7.75	7.92	8.09	8.26	8.44	8.61
$27.50-	6.22	6.65	6.82	6.99	7.17	7.34	7.51	7.68	7.85	8.03	8.20	8.37	8.54	8.71	8.89	9.06
$30.00-	6.66	7.09	7.26	7.43	7.61	7.78	7.95	8.12	8.29	8.47	8.64	8.81	8.98	9.15	9.33	9.50
$32.50-	7.11	7.54	7.71	7.88	8.06	8.23	8.40	8.57	8.74	8.92	9.09	9.26	9.43	9.60	9.78	9.95
$35.00-	7.56	7.99	8.16	8.33	8.51	8.68	8.85	9.02	9.19	9.37	9.54	9.71	9.88	10.05	10.23	10.40
$37.50-	8.01	8.44	8.61	8.78	8.96	9.13	9.30	9.47	9.64	9.82	9.99	10.16	10.33	10.50	10.68	10.85
$40.00-	8.46	8.88	9.05	9.22	9.40	9.57	9.74	9.91	10.08	10.26	10.43	10.60	10.77	10.94	11.12	11.29
$42.50-	8.91	9.33	9.50	9.67	9.85	10.02	10.19	10.36	10.53	10.71	10.88	11.05	11.22	11.39	11.57	11.74
$45.00-	9.36	9.78	9.95	10.12	10.30	10.47	10.64	10.81	10.98	11.16	11.33	11.50	11.67	11.84	12.02	12.19